

## Graham County

### Estimated Economic Impact of Agriculture, Food, and Food Processing Sectors

6/11/2018

Using the most recent IMPLAN data available (2016) adjusted for 2018, 8 agriculture, food, and food processing sectors were analyzed to determine their overall contribution to the Graham County economy.<sup>1</sup>

These 8 sectors have a total direct output of approximately **\$79.6 million** and support **444 jobs** in Graham County. Running the model for all 8 sectors simultaneously produces the following results:

Agriculture, Food, and Food Processing Sector Contribution to Overall Graham County Economy						
Impact Type <sup>2</sup>	Employment	% Employment	Total Value Added <sup>3</sup>	Total Value Added % of Gross Regional Product <sup>4</sup>	Output <sup>5</sup>	Output % of Gross Regional Product
Direct Effect	443.8	22.04%	\$17,655,832	17.56%	\$79,635,598	79.19%
Indirect Effect	71.5	3.55%	\$5,061,985	5.03%	\$10,205,948	10.15%
Induced Effect	16.9	0.84%	\$1,117,208	1.11%	\$2,097,453	2.09%
Total Effect	532.1	26.43%	\$23,835,026	23.70%	\$91,938,999	91.42%

As shown in the above table, agriculture, food, and food processing sectors support **532 jobs**, or **26.43%** of the entire workforce in the county. These sectors provide a total economic contribution of approximately **\$91.9 million**, roughly **91.42% of the economy**.

Another metric used to calculate the importance of sectors in an economy is their value added as a percentage of GRP. Total value added by the 8 agriculture, food, and food processing sectors is approximately **\$23.8 million**, or **23.70% of the GRP**. This indicates that personal income, business income, and taxes generated by these sectors account for **23.70% of the total economy**.

The following tables document the top industries affected by employment and output, as well as a listing of all industries that were analyzed.

1 Article on building a contribution analysis in IMPLAN that avoids double counting:

[http://www.implan.com/index.php?option=com\\_content&view=article&id=660%3A660&catid=253%3AKB33&Itemid=70](http://www.implan.com/index.php?option=com_content&view=article&id=660%3A660&catid=253%3AKB33&Itemid=70)

2 Direct, indirect, and induced effects sum together to estimate the total economic contribution in the state. **Direct effects** capture the contribution from agricultural and food products. **Indirect effects** capture the economic benefit from farms and agricultural businesses purchasing inputs from supporting industries within the state. **Induced effects** capture the benefits created when employees of farms, agricultural businesses, and the supporting industries spend their wages on goods and services within the state.

3 Value added = labor income + indirect business taxes + other property type income.

4 GRP = final demand of households + governments expenditures + capital + exports - imports - institutional sales.

5 Output = intermediate inputs + value added.

In the top ten agriculture, food, and food processing sectors by employment, the beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming sector is the top employer with **237 employees**. This table also shows the amount of jobs that are created by the agriculture industry in Graham County.

Top Ten Agriculture, Food, and Food Processing Sectors by Employment		
Sector	Total Employment	Total Output
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	236.9	\$29,961,532
Grain farming	89.7	\$34,805,916
Animal production, except cattle and poultry and eggs	55.7	\$7,026,402
All other crop farming	33.9	\$2,692,332
Landscape and horticultural services	19.6	\$648,867
Wholesale trade	18.4	\$3,011,894
Truck transportation	13.1	\$1,901,868
Extraction of natural gas and crude petroleum	6.3	\$679,276
Real estate	5.4	\$1,163,520
Maintenance and repair construction of nonresidential structures	4.8	\$508,329

The grain farming sector directly contributes approximately **\$34.8 million** to the Graham County economy. The table below also shows the amount of revenue that is generated in other industries by having a strong agriculture industry.

Top Ten Agriculture, Food, and Food Processing Sectors by Output		
Sector	Total Employment	Total Output
Grain farming	89.7	\$34,805,916
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	236.9	\$29,961,532
Animal production, except cattle and poultry and eggs	55.7	\$7,026,402
Oilseed farming	3.7	\$4,037,807
Wholesale trade	18.4	\$3,011,894
All other crop farming	33.9	\$2,692,332
Truck transportation	13.1	\$1,901,868
Real estate	5.4	\$1,163,520
Monetary authorities and depository credit intermediation	3.6	\$690,963
Extraction of natural gas and crude petroleum	6.3	\$679,276

Below is a summary of all agriculture data with employment levels and output level. These values can tell how many jobs are represented by each agriculture, food, and food processing sector and the output they contributed to the Graham County economy.

<b>All Agriculture, Food, and Food Processing Sectors</b>		
<b>Sector</b>	<b>Total Employment</b>	<b>Total Output</b>
Oilseed farming	3.7	\$4,037,806.58
Grain farming	89.7	\$34,805,916.41
All other crop farming	33.9	\$2,692,331.84
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	236.9	\$29,961,532.07
Poultry and egg production	0.1	\$79,149.50
Animal production, except cattle and poultry and eggs	55.7	\$7,026,402.32
Bread and bakery product, except frozen, manufacturing	4.2	\$383,592.75
Landscape and horticultural services	19.6	\$648,867.03

All 105 counties in Kansas have an IMPLAN model and an agriculture, food, and food processing contribution summary. These values do not factor in the retail environment of food sales. Food retail is important, but in order to provide the most accurate picture of what production agricultural and processing contributes to Graham County, the retail sector was omitted.